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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,240	02/07/2002	Takuya Yamamoto	108384-00041	6547

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT PAPER NUMBER

1775

8

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/067,240

Applicant(s)

YAMAMOTO ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 23 and 26 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,4,8-10,14-16 and 22 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-7, 11-13, 17-21, 24-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## OFFICE ACTION

### *Election/Restrictions*

1. Original method claim 23 and new method claim 26 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 5 titled Response to Restriction Requirement, received June 27, 2003.

### *Amendment*

2. The Amendment filed October 20, 2003 has been entered. Claims 1-26 are pending in this application with nonelected invention of method claims 23 and 26 withdrawn from consideration.

### *Claim Rejections - 35 USC § 112, First Paragraph*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

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art that the inventors, at the time the application was filed, had possession of the claimed invention. The applicant has amended the claims to specifically prohibit an additional nickel layer on the second side (e.g. see "on said first side but not on said second side" - claim 1, line 8). It is not clear where the original disclosure specifically prohibited an additional nickel layer on the second side or provided support for the concept of this negative limitation. See MPEP 2173.05(i). *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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6. Claims 1-2 and 24 are rejected under 35 U.S.C. 102(a) as being anticipated by Yamamoto (U.S. Patent Application Publication 2002/0004123 A1, filed June 20, 2001).

7. Yamamoto (different inventive entity than this pending application) discloses a surface treated copper foil wherein a nodular treatment can be applied to one side of the copper foil and a nickel layer can be applied to the other side of the copper foil (e.g. see paragraph [0011]). The thickness of the nickel layer can be between 0.01  $\mu\text{m}$  to 4  $\mu\text{m}$ , but at least a 1  $\mu\text{m}$  layer is considered (e.g. see paragraph [0015]) and the nickel layer can be formed on the shiny side of the carrier copper foil (e.g. see paragraph [0033]). Yamamoto's nickel layer may further contain cobalt (e.g. paragraph [0017]) and the pending claims do not require any particular content of nickel or cobalt in their nickel and cobalt layers. The copper foil may include a copper carrier, a nickel layer a copper foil layer and a nodular treatment (e.g. see Figure 1) and the carrier can be the peelable type with an organic layer (e.g. see paragraph [0014]).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-7, 11-13, 17-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (U.S. Patent Application Publication 2002/0004123 A1, filed June

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20, 2001) in view of Kataoka (U.S. Patent 6,270,889), Yoshioka (U.S. Patent 6,541,126) or Kataoka (U.S. Patent Application Publication 2002/0090497 A1).

10. Yamamoto (different inventive entity than this pending application) discloses a surface treated copper foil wherein a nodular treatment can be applied to one side of the copper foil and a nickel layer can be applied to the other side of the copper foil (e.g. see paragraph [0011]). The thickness of the nickel layer can be between 0.01  $\mu\text{m}$  to 4  $\mu\text{m}$ , but at least a 1  $\mu\text{m}$  layer is considered (e.g. see paragraph [0015]) and the nickel layer can be formed on the shiny side of the carrier copper foil (e.g. see paragraph [0033]). Yamamoto's nickel layer may further contain cobalt (e.g. paragraph [0017]) and the pending claims do not require any particular content of nickel or cobalt in their nickel and cobalt layers. The copper foil may include a copper carrier, a nickel layer a copper foil layer and a nodular treatment (e.g. see Figure 1) and the carrier can be the peelable type with an organic layer (e.g. see paragraph [0014]). Regarding the intended use limitation "for processing for laser hole formation", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Yamamoto may differ from claims 5-7 and 11-13 in that the composition of the organic release agent and the roughness of the carrier foil may not be specified. Kataoka '889 (e.g. claim 1), Yoshioka (e.g. column 4, lines 30-49) and Kataoka '497 (e.g. see paragraph [0040]) all clearly show common organic release agents now currently used for carrier foils. In addition Yoshioka (e.g. Table 1)

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and Kataoka '497 (e.g. see paragraph [0033]) further show conventional surface roughnesses of carrier foils. In view of Kataoka and Yoshioka, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use conventional organic release agents and use carrier foils with conventional surface roughnesses in the invention of Yamamoto because Yamamoto does not specify his release agent composition or his carrier surface roughness and the Kataoka and Yoshioka references show these compositions and roughnesses are conventional for carrier foils currently being used in industry.

***Allowable Subject Matter***

11. Claims 3-4, 8-10, 14-16 and 22 are allowed.

***Response to Arguments***

12. Applicant's arguments filed October 20, 2003 have been fully considered but they are not persuasive.

13. Regarding the rejection of the claims under 35 U.S.C. 102(a) as being unpatentable over Yamamoto (Japanese publication 2001-308477), the applicant has clarified for the record that the inventive entity of the present application and the Japanese publication is indeed the same and therefore this rejection has been withdrawn.

14. Regarding the rejection of claims 1-2 and 24 under 35 U.S.C. 102(a) as being anticipated by Yamamoto (U.S. Patent Application Publication 2002/0004123 A1, filed June 20, 2001),

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applicant asserts that this publication constitutes the work of three of the four inventors of the present application and therefore renders the rejection moot. The examiner notes, however, that in view of the different inventive entity of the publication, the rejection is not rendered moot. The fact that applicant may have been the assignee of record of the Yamamoto at the time the invention was made does not affect the applicability of anticipatory prior art.

15. Regarding the rejection of claims 5-7, 11-13, 17-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (U.S. Patent Application Publication 2002/0004123 A1, filed June 20, 2001) in view of Kataoka (U.S. Patent 6,270,889), Yoshioka (U.S. Patent 6,541,126) or Kataoka (U.S. Patent Application Publication 2002/0090497 A1), the applicant argues that since "the assignee of the present application, had, at the time the present invention was made, rights to the invention" of Yamamoto, the Yamamoto reference is not applicable prior art under 35 U.S.C. 103. The examiner notes, however, that in view of the different inventive entity of the publication and the fact that the Yamamoto reference was published before the filing of the present application (i.e. applied under 35 U.S.C. 102/103 section (a), and not 102/103 sections (e),(f) or (g)), the rejection is not rendered moot.

16. Regarding the rejection of claims 1 and 24 under 35 U.S.C. 103(a) as being unpatentable over Becker (U.S. Patent 6,531,950) in view of Lee (U.S. Patent 5,908,542), applicant has amended the claims to prohibit a nickel layer on the second side. Since there is no motivation in Becker to modify the copper foil in the currently claimed manner, this rejection has been withdrawn.

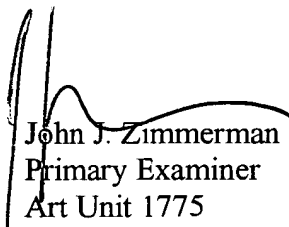


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***Conclusion***

17. Applicant's amendment prohibiting the metal layer on the second side necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571)-272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

  
John J. Zimmerman  
Primary Examiner  
Art Unit 1775

jjz  
January 7, 2004